

AMENDMENTS TO THE CLAIMS

Please amend claim3, as follows:

1 1. (Original) A cathode for an electron tube, comprising:

2 a base metal; and

3 an electron emissive material layer attached on said base metal, said electron emissive layer

A¹ including a surface roughness measured from a distance between a highest point and a lowest point
5 of the surface of said electron emissive material layer, being controlled to be less than or equal to
6 8 microns.

1 2. (Original) The cathode of claim 1, further comprised of the surface roughness distance

2 being less than or equal to 5 microns.

1 3. (Currently Amended) The cathode of claim 1, A cathode for an electron tube, comprising:

2 a base metal; and

3 an electron emissive material layer attached on said base metal, said electron emissive layer

4 including a surface roughness measured from a distance between a highest point and a lowest point
5 of the surface of said electron emissive material layer, being controlled to be less than or equal to
6 8 microns.

7 further comprised of the density of said electron emissive material layer being 2 to 5

8 mg/mm³.

1 4. (Original) The cathode of claim 1, further comprised of the thickness of the electron
2 emissive material layer being from 20 to 70 microns.

1 5. (Original) The cathode of claim 1, further comprised of said electron emissive material
2 layer being attached on said base metal by one method selected from the group consisting essentially
3 of printing and deposition.

1 6. (Original) The cathode of claim 1, further comprised of said electron emissive material
2 layer being attached to said base metal by a screen printing method.

1 7. (Withdrawn) A method of preparing the cathode for an electron tube of claim 1, the
2 method comprising the steps of:

3 preparing a paste comprising 40 to 60% by weight carbonate powder, 30 to 50% by weight
4 solvent, and 1 to 10% by weight binder, based on the total weight of said paste; and
5 attaching said paste on said base metal using one member selected from the group consisting
6 essentially of screen printing, painting and roll coating.

1 8. (Withdrawn) The method of claim 7, further comprised of said solvent being one member
2 selected from the group consisting essentially of terpinol, butyl carbitol acetate, and a combination

3 of terpinol and butyl carbitol acetate.

1 9. (Withdrawn) The method of claim 7, further comprised of said binder being one member
2 selected from the group consisting essentially of nitrocellulose and ethylcellulose.

A¹¹
1 10. (Withdrawn) A method, comprising the steps of:

2 mixing carbonate powder, solvent, and binder to form a paste;

3 applying said paste on a base metal of a cathode for an electron tube to form an electron
4 emissive layer of said cathode, said paste to form an electron emissive layer for said cathode;

5 controlling a surface roughness measured from a distance between a highest point and a
6 lowest point of the surface of said electron emissive material layer to be less than or equal to 8
7 microns.

1 11. (Withdrawn) The method of claim 10, with said step of controlling the surface roughness
2 further comprised of the surface roughness being controlled to be less than or equal to 5 microns.

1 12. (Withdrawn) The method of claim 10, with said step of mixing carbonate powder,
2 solvent, and binder to form a paste, further comprised of carbonate powder being 40 to 60% by
3 weight carbonate powder, 30 to 50% by weight solvent, and 1 to 10% by weight binder, based on
4 the total weight of said paste.

1 13. (Withdrawn) The method of claim 10, further comprised of said solvent being one
2 member selected from the group consisting essentially of terpinol, butyl carbitol acetate, and a
3 combination of terpinol and butyl carbitol acetate.

a¹
a² 14. (Withdrawn) The method of claim 10, further comprised of said binder being one
2 member selected from the group consisting of nitrocellulose and ethylcellulose.

1 15. (Withdrawn) The method of claim 10, further comprising the step of controlling the
2 thickness of the electron emissive layer to be 20 to 70 microns.

1 16. (Withdrawn) The method of claim 10, with said step of applying said paste on said base
2 metal further comprising of apply said paste by one member selected from the group consisting of
3 printing and deposition.

1 17. (Withdrawn) The method of claim 10, with said step of applying said paste on said base
2 metal further comprising of apply said paste by screen printing and said step of controlling the
3 surface roughness by screen printing.

1 18. (Withdrawn) A method, comprising the steps of:
2 mixing carbonate powder being 40 to 60% by weight carbonate powder, 30 to 50% by weight
3 solvent, and 1 to 10% by weight binder to form a paste, based on the total weight of said paste; and

4 printing said paste on a base metal of a cathode for an electron tube to form an electron
5 emissive layer of said cathode.

Canceled
1 19. (Withdrawn) The method of claim 18, further comprised of said printing being screen
2 printing.

a
1 20. (Withdrawn) The method of claim 18, further comprising the step of controlling a surface
2 roughness of said electron emissive layer to a predetermined distance, the surface roughness being
3 measured from a distance between a highest point and a lowest point of the surface of said electron
4 emissive material layer.